CORRES. CONTROL
INCOMING LTR No.

0389 RF 91

DUE DATE 3/30/91

ACTION J. Kersh

DIST.	LTR	ENC
ALLHOFF, F.H.		
BRETZKE, J.C.		
BURLINGAME, A.H.		
CROUCHER, D.W.		
DAVIS, J.G.		
EVERED, J.E.	X	X
FERRERA, D.W.		
FERRERA, K.P.		
FERRIS, L.R.		
FRAIKOR, F.J.		
FRANCIS, G.E.		
GOODWIN, R.		
HEALY, T.J.		
IDEKER, E.H.		
JENS, J. P.		
KERSH, J.M.	X	X
KIRBY, W.A.		
KIRKEBO, J. A.		
LEE, E.M.		
MAJESTIC, J.R.		
McDANIEL, M.G.		
MEURRENS, B.E.		
MONTROSS, R.W.		
MORGAN, R.V.		
NORTH, P.		
PALMER, L.A.		
PARNELL, R.F.		
PIZZUTO, V.M.		
POTTER, G.L.	X	X
RHOADES, J.L.		
SAFFELL, B.F.		
SHANNON, W.M.		
SWANSON, E.R.		
WIEBE, J.S.		
WILKINSON, R.B.		
WILSON, J.M.		
YOUNG, E.R.		
ZANE, J.O.		

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Reviewed for Addressee
Corres. Control RFP

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DATE BY

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RF-46522 (Rev 11/90)

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EG&G ROCKY FLATS PLANT CLASSIFICATION OFFICE

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MAR 5 1991

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WMED:CF:1362

Comments on Draft Groundwater Protection and Monitoring Program Plan

John M. Kersh, Associate General Manager
Environmental Restoration & Waste Management
EG&G Rocky Flats, Inc.

Attached are the Rock Flats Office comments on the Draft Groundwater Protection and Monitoring Program Plan prepared by your staff as partial fulfillment of DOE Order 5400.1 requirements.

The comments attached only reflect significant shortfalls, corrections, and changes to the overall document. There was no real attempt to correct editing errors, spelling, etc. It is assumed that these will be corrected by the preparers prior to finalizing the draft.

Please have your staff make the necessary changes and corrections and submit a Final Draft document 30 days from the date of this memo.

If there are any questions, please feel free to contact me or have your staff contact Tom Lukow of my staff at extension 4561.

David P. Simonson
David P. Simonson
Acting Assistant Manager
for Environmental Management

Attachment

cc w/o Attachment:
T. Lukow

DOCUMENT CLASSIFICATION
REVIEWER
CLASSIFICATION OFFICE

ADMIN RECORD

A-SU-001702

COMMENTS ON GROUNDWATER PROTECTION AND MONITORING PROGRAM PLAN

This Plan is intended to consolidate the U.S. Department of Energy (DOE) Order 5400.1 requirements for a Groundwater Protection Management Plan and a Groundwater Monitoring Plan into one plan. The relationship between these two requirements must be clearly shown as being met within this document. The relationship between the objectives for the two requirements must be clearly presented so the structure of the overall program can be tailored to fulfill these requirements. This has not be done in this draft plan.

A primary objective of DOE 5400.1 and those of any ground water monitoring program is the need to recognize what information is necessary to make sound management decisions. Historically our programs have been developed prior to and without documenting any long or short term objectives. Identifying and documenting our objectives should be a primary purpose of this document in order to know what we are trying to achieve and why. Furthermore it is necessary to address those objectives and show the relationship between objectives and information gathered. In this particular case we may find that many of the monitoring wells have fulfilled their purpose and could be eliminated or less frequently sampled. This is one type of objective that should be addressed within this document.

Monitoring of any kind must provide data that will be used for making evaluations through analysis and used for meeting reporting requirements. Information, or data, should not be collected unless the final deposition of that data is identified. This may be used within a required report or as part of a baseline data base. Descriptions of the types and number of reports and their distribution need to be discussed. Reporting requirements and their objectives are critical elements missing in this plan. The analysis of information gathered to fulfill objectives and reporting requirements must be fully addressed. Information gathered must be compared to expectations concerning a sampling site as part of the analysis for management of that site.

Other elements of DOE Order 5400.1 which are not discussed sufficiently in this document are: 1) how surveillance monitoring is being conducted for all identified Comprehensive Environmental Response Compensation and Liability Act (CERCLA) contamination sites, 2) what criteria is to be utilized for determining when monitoring is necessary prior to startup of specific planned operations, 3) when and how monitoring of relevant plant operations, such as the footing and area drains, are to be conducted, 4) how are notifications to be handled for discovery of new ground water problems, and 5) a discussion of the rationale for the design of the sampling and monitoring networks, i.e., sampling frequency.

Title Page: The title of this plan is "Groundwater Protection and Monitoring Program Plan". Any reference to the title within the document needs to be changed to reflect this title.

Page iv: Table 1-3 should use a more descriptive term than "Remediation". These reports consist of more than just remediation, i.e. Characterization. Perhaps they should be referenced to the IAG requirements.

Page iv: Table 2-1: The term "distance" is misleading in the title, it should be replaced with "vertical separation".

Page iv: Table 2-5: The term "parameter" should be made plural.

Page iv: Table 2-9: This table should be retitled "Estimated Ground Water Quantity Beneath RFP".

COMMENTS ON GROUNDWATER PROTECTION AND MONITORING PROGRAM PLAN

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Page iv: Table 2-9: This table should be retitled "Estimated Ground Water Quantity Beneath RFP".

Page iv: Tables 4-1 & 4-3: These tables should be changed to reflect that these are the Management organization, for example, DOE Management Organization.

Page v: The summary should expand on the description of the groundwater plans and the purpose of this document. It should explain how this one plan will fulfill the requirements of DOE Order 5400.1 to prepare a Groundwater Protection Plan and partial requirement for an Environmental Monitoring Plan. The use of this combined plan for program coordination and direction should be fully explained. It should include discussion of how the plan will guide the program through the next 3 years with annual updates.

Page v, para. 1, line 2: Change the beginning of the sentence to read "DOE Order 5400.1, Chapter III..." and remove "& monitoring Programs." Then add these statements to end of paragraph: "Chapter IV of DOE Order 5400.1 requires preparation of an environmental monitoring plan. Through completion of this Groundwater Protection & Monitoring Program Plan we are satisfying the requirements of both Chapters for managing the groundwater resource."

Page v, para. 3: If this paragraph is meant to be a short synopsis of the drivers behind the actions, shouldn't things like the Interagency Agreement (IAG), or other local agreements, etc. be included? This seems to be incomplete.

Page vi, para. 2: It is mistakenly stated that there are four Operating Units subject to interim status. The Process Waste Lines are not considered by the Colorado Department of Health (CDH) to be interim status units. This is mistakenly referenced throughout the plan and needs to be corrected. On page 1-5 it is not included as one of the interim units, which is correct, however, there are many other references to there being four units under interim status which need to be corrected.

Page vi: The section under " Rocky Flats Plant (RFP) Groundwater Protection and Monitoring Plan" discusses the monitoring aspects of the program, however there isn't any discussion of the Protection aspects of the program. Some discussion of the protection thrust of the program needs to be included to summarize the requirements and intent of this document.

Page vi, para. 3, line 2: This paragraph references the 40 CFR 265.90 (d) as a requirement, however it also needs to reference the State regulations which are: 6 CCR 1007-3, Section 265.90 (d). The State of Colorado has been given primacy under the Resource Conservation and Recovery Act (RCRA) for many portions of the Act, and the State regulations are in some cases much more stringent then the Federal ones. The State regulation reference needs to be added throughout the document where the Code of Federal Regulations (CFR) is referenced.

Page vii, para. 2: The state would probably not agree that the groundwater program is in compliance with CERCLA and RCRA. An example would be the Notice of Violation (NOV) issued in April 1990. Change the first line by replacing "found to be" with "every effort is being made to ensure it is". Since CDH is lead regulatory agency on this replace the U.S. Environmental Protection Agency (EPA) with CDH in the last line of paragraph.Compliance of the RCRA ground water monitoring is an issue. Technically we are not in compliance for two reasons 1) the Assessment Plan has never been approved and 2) quarterly ground water reports are not being prepared. The document discusses this flaw in its self-improvement section by identifying the need to establish a formal means of generating this document. Therefore the document can not state that the program is in compliance.

Page vii, para. 3, line 6: It is not clear what quarterly reports are referenced here. Isn't the data reported by quarters in the annual report and not actually reported quarterly? Needs to be clarified.

Page vii, last para.: This paragraph and the following three paragraphs on page viii make use of non-committal terms such as "needs to be", "should be", "must be", "may be", and "can be". These need to be changed to an action mode. These paragraphs need to be changed to reflect that they will be done and should include who will do them.

Page viii, Budgetary Requirements Section: This section should be changed to reflect the estimated budgetary needs for the next five years and should be identical to the 5 Year Plan. This can then be updated during the annual review of this plan.

Page 1-1, Introduction: The Introduction should explain why there is a need for this plan and how it will be used, etc.. Some of the physical information, such as section 1.3 concerning the history of activities would probably more effectively fit in with Section 2.0 on Background.

Page 1-1, para. 4, line 3: Change "Non-hazardous" to "Non-hazardous/non-radioactive" to reflect that waste disposed of on site does not fit the definition of either of those.

Page 1-4, para. 2, line 5: The acronyms "SMWUs (IHSSs)" have been explained once and does not need to be carried through the rest of the document. If IHSS is the current approved acronym then it is sufficient to use it in the remainder of the document..

Page 1-5, para. 1: This discussion of SWMUs needs to be expanded to describe how they were identified and why we believe these are the major potential sources of contamination.

Page 1-5, Section 1.2.2: The use of correct regulatory terminology is necessary when discussing groundwater reports. It would be beneficial to discuss the IAG process of report development, what guidance documents are required for the IAG and how these reports are distributed.

Page 1-5, para. 2, line 4: The statement "former report" is confusing. Which report is this referring to?

Page 1-5, para. 2, line 5: Groundwater data have always been reported in the Annual Environmental Report. It has only been recently that it has not been included in total because of the large amount of data available.

Page 1-12, Section 1.3: This section primarily addresses the history of monitoring at RFP, what about the protection phase of the program?

Page 1-14, para. 1, line 3: The EPA needs to be added to this sentence as being one of the signatories to the compliance agreement.

Page 1-14, para. 1, line 15: There needs to be an explanation of why the Comprehensive Environmental Assessment and Response Program (CEARP) was more comprehensive. One reason was that CEARP addressed radioactivity while RCRA and CERCLA did not. RCRA still doesn't address it while radioactivity is now addressed under CERCLA through the Superfund Amendment and Reauthorization Act (SARA) amendments.

Page 1-15, para. 1, line 1: It should be noted that the 68 wells installed in 1987 were in the same areas as those installed in 1986. Reference to Table 2-4 should be included to summarize the number of wells in the areas.

Page 1-15, para. 2: This paragraph needs to include discussion of the 1989 and 1990 NOVs issued by the CDH.

Page 1-15, para. 3: This paragraph should be updated to include a discussion of the current status of the IAG.

Page 1-16, Figure 1-3: The figure should be modified to make the wells more visible since it is the main feature to be represented on the map. In addition, the title of the figure should be repositioned so it is visible when the page is folded.

Page 1-17, Section 1.4: This section should be moved up to the front of the Introduction section

Page 1-17, para. 1, line 6: The purpose of this document is not to "document ongoing groundwater monitoring at RFP". This document is intended to provide guidance for the groundwater program, both protection and monitoring activities. Documentation is not a function of this plan, documentation is supposed to occur in data files, monthly and quarterly reports, project files, etc.

Page 2-2, Figure 2-1: The print is very difficult to read on this figure, perhaps the print could be made a little larger. In addition, it would be helpful to include a figure showing the stratigraphic section specific to RFP.

Page 2-3, para. 4, line 3: "Distances" should be changed to "vertical distances" and also changed in Title of Table 2-1.

Page 2-5, para. 4: This paragraph should be moved to page 2-1 where the overall stratigraphic sequence is discussed.

Page 2-6, Figure 2-2: The term "deltaic" is too narrow in respects to the model being presented. The term "idealized" is more encompassing and therefore more appropriate because the model presents more than just a deltaic deposition.

Page 2-6, Figure 2-2: For the figure to be consistent, the types of lithologies which occur in the upper distributary facies should be shown on this Figure as they are for the lower channel facies

Page 2-8, para. 3, line 5: In the discussion of the deep fault, the amount of displacement should be included.

Page 2-8, para. 3, last line: Is there a reference for the (REF) shown at the end? If there is it needs to be shown.

Page 2-8, Section 2.1.3: This section describes a process but doesn't describe a model as the title indicates. What model is being used? Is this section just a supposition about how the process could have happened, or is there documentation that it actually occurred this way?

Page 2-9, Figure 2-3: Since the seasonal recharge is discussed on page 2-14, attempt to show the seasonal recharge areas on this figure as well.

Page 2-11, Figure 2-5: This figure needs legend and there should be some explanation of the seismic lines shown.

Page 2-12, para 1: The relationship of the RFP to the depositional model needs more elaboration. The RFP basal sandstone is perceived as being the finer grained sandstone equivalent of the conglomerate and was deposited in relatively higher ground than the scoured area where the conglomerate is found.

Page 2-12, Section 2.2: The beginning of section 2.2 needs to be rewritten with more technical discussion emphasizing the geologic role in ground-water flow rate, direction and quality as well as the objective for delineation of the various hydrostratigraphic units. This is the purpose for characterizing the geology. In addition, the uncertainty of where the regional aquifers exist in relation to RFP is essential for the purpose of ground water protection. The geologic characterization program should be mentioned as being necessary to meet the objectives of this plan and referenced to the section where it is thoroughly discussed.

Page 2-12, para. 3, line 4: The term "these models" needs to be explained. What models is it referring to? There needs to be a reference to the model and/or its source.

Page 2-12, Section 2.2: In addition to Figure 2-6, two maps should be added. One showing the depth to bedrock and a map showing the deeper sandstone channels. These are relevant to the groundwater discussion in this section.

Page 2-13, Figure 2-6: This figure needs some cosmetic work and possibly a legend. Required changes are 1) an explanation of the dashed lines and 2) since a fair amount of extrapolation occurs between the 903 Pad and the solar evaporation ponds it should be shown as solid lines with some broken line symbolism used.

Page 2-14, Section 2.2.1: This section should include a discussion of the upper hydrologic unit and how the delineation process is being performed on site. In addition, a discussion of regional aquifers is necessary with explanation of how they tie into the plant site and what their location and properties are. This should also be referenced back to the geology sections.

Page 2-14, para. 1, line 4: The collective terms "upper" and "lower" Arapahoe need to be tied into the previous geologic descriptions of the Plant as presented in the Figure 2-3. For example, which of the six sandstones lie in the upper and which are in the lower.

Page 2-14, Section 2.2.2: A discussion is needed to explain how hydraulic conductivities have been determined, i.e. method, analysis, etc. It should also be explained that the numbers presented are geometric means.

Page 2-14, para. 2, line 3 The term "upper most aquifer" should be changed to "upper hydrologic unit".

Page 2-14, para. 2, line 4: The reference to Figure 2-4 is incorrect and should be dropped.

Page 2-14, para. 3, line 5: Since there has been efforts to eliminate the duplication of well numbers, and since there is still some confusion existing, well 1-89A should be rechecked to confirm that it is correct in this situation.

Page 2-15, section 2.3.1: The title of this section should be changed to "Current Monitoring Well Network."

Page 2-16, para. 1, line 9: Explain the term "suitable coverage"? Who determined that it was suitable? CDH may not agree that it is suitable since they issued a NOV in 1990.

Page 2-16, Well Construction: There needs to be a discussion about why the well construction materials changed over time, i.e. casing change from stainless steel to polyvinyl cloride (PVC), etc.

Page 2-16, Well Construction: There needs to be a discussion of the Pre-1986 wells. This should include whether they are being monitored or not. Discussion should also be included on plans for abandonment if appropriate.

Page 2-17, para. 2, line 1: This states that there were 43 alluvial wells and 24 bedrock wells installed in 1987 for a total of 67, however on page 2-15 the total is reflected as 68 wells, this discrepancy needs to be corrected.

Page 2-19, para. 1: This paragraph should include "protection" as one of the primary tasks of this program. The program is supposed to address protection and monitoring, however, protection is only mentioned in relation to the SWMUs, it goes beyond that.

Page 2-19, para. 2, line 7: What does the term "one quarter of data" mean? Is this one quarter of all the data, data for one year, and is it the first quarter, second quarter, or what? It needs to be further defined.

Page 2-19, Section 2.3.2: A brief summary of the IAG schedules and status of any Intermeasure (IM)/Interim Remedical Action (IRA) is needed either at the end of each Operable Unit (O.U.) discussion or in a summary table.

Page 2-19, para. 1, last line: The term "significant" needs to be explained.

Page 2-19, para. 2, line 1: Plate 1 should be referenced in the discussion of the monitoring well locations. In addition, a total of 346 wells are being used to monitor groundwater at RFP however 386 wells exist. There needs to be an explanation of why all the wells are not being used for monitoring.

Page 2-19, Section 2.3.2: In order to present a better picture of the potential pathways discussion on each of the O.U.s should include discussion of the specific Arapahoe sandstones associated with it.

Page 2-19, 881 Hillside: It should be explained that the 881 Hillside was originally chosen as the High Priority site because of the availability of data (pre-1986). Since that time additional data from this site as well as other sites has changed this view.

Page 2-25, para. 3, line 3: There needs to be a discussion on why the VOC plume, or concentration, diminishes rapidly.

Page 2-26, Figure 2-8: There are better maps then this one for all the OUs that show monitoring wells and IHSS locations. They should be used.

Page 2-27, para. 4, line 3: This should be expanded to explain where these confined bedrock systems are. For example, how far are they from the contaminated sources or systems?

Page 2-29, para. 1, line 4: The possible sources of the VOCs in this area is either the original 207C pond, which has been removed or the old process lines in the area. Their locations relative to the solar ponds needs to be presented.

Page 2-29, para. 2: It should be noted that the solar ponds are under RCRA subpart F 265.90(d) alternate ground water monitoring program.

Page 2-29, para. 3: This paragraph doesn't seem logical. If down gradient wells are higher than upgradient contamination it would appear that the solar ponds would be suspect. This needs to be further explained and clarified.

Page 2-37, para. 4, line 8: This sentence suggests that the solar pond area is not a likely candidate because VOCs are not found in this area. This statement is inconsistent with the discussion on page 2-29, 1st para., 4th line.

Page 2-37, para. 4, last line: The "other waste management practices" needs to be explained. Where or what are these other practices and are they being corrected.

Page 2-39, Present Landfill: The presence of trichloroethylene (TCE) in the present landfill is not discussed. The fact that it is present is the primary reason it became a RCRA unit. This needs to be added to the discussion.

Page 2-39, para. 3: This paragraph needs to be expanded a little bit. It leaves the reader without enough information to reach a conclusion. The last sentence should be expanded to address what parameters and concentractions occurred above background and how much above.

Page 2-49, para. 1: Explain why if several parameters are slightly above background it is not suggestive of contamination.

Page 2-54, Table 2-9: The Porosity values seem high. Numbers need to be confirmed and other values re-calculated if needed.

Page 2-55, para. 1, line 4: Assuming past stratigraphic knowledge is correct the majority of our bedrock wells are in the Arapahoe, however, this sentence states that only three wells have penetrated it. In fact, only three wells have penetrated the basal sandstone.

Page 2-55: As mentioned earlier, the location of regional aquifers in relation to the RFP is very important for assessing risks to downstream users and potential geologic setting which help drive characterizations. This point should be addressed in this section as well in section 2.2 on hydrogeologic features.

Page 2-56, section 2.3.4: The discussion of the interaction of ground water and surface water is very limited, the interaction must eventually be quantified. DOE Order 5400.1(III) requires that schedules be developed for filling these data gaps.

Page 2-58, para. 2, line 7: The text refers to "detention ponds", however, Figure 2-17 calls them "holding ponds". This needs to be corrected.

Page 2-63, para. 1, line 1: The amount of water pumped back from the pump house should be included in the discussion.

Page 2-63, para. 1, last line: The reference indicates EG&G, 1988. Either the referenced year is wrong or the reference should be Rockwell.

Page 2-63: The reference "DOE 1990p" is shown several times on this page, however it can not be found in the reference list.

Page 2-63, para. 2, line 4: Explain what the term "elevated concentrations" means.

Page 2-63, para. 2: The terms "increased concentrations", and "elevated concentrations" need to be explained.

Page 2-63, para. 3: The terms "detectible VOC concentrations" and "relatively high concentrations" need to be explained.

Page 2-64, para. 1, last line: The term "significantly" needs to be explained.

Page 2-65 para. 1, line 5: The "surface-water monitoring" should be changed to "surface-water management".

Page 3-1, Technical Requirements: It should be discussed that the technical requirements are those which are necessary for compliance with the regulatory requirements. Several of these could in themselves be considered a program and they need to be discussed in detail. Two examples would be the background characterization and the geologic characterization efforts. It would also be beneficial for the discussion to include explanations of how the regulations can not specify in detail the requirements for characterizing groundwater because of the multitude of disciplines as well as potential sites involved. Therefore they provide the overall objectives and guidance, and this allows flexibility for site specific considerations.

Page 3-2, para. 1, last line: The term "additional time and data" needs to be clarified.

Page 3-2, para. 2, line 2: The regulations are not the impacts on the program, in fact they are the drivers. They are what direct and guide and provide the impedance to the program.

Page 3-5, para. 2: This paragraph is incorrect and needs to be changed. The paragraph could be replaced with the following suggested paragraph:

> "Interim status facilities are those facilities that were in existence prior to 1981 and in a sense were grandfathered under the RCRA regulations until they receive permits or are closed under the provisions of RCRA. Interim status facilities are regulated under 40 CFR Part 265, and 6 CCR 1007-3, Part 265. Once a facility receives either an operating permit as a hazardous waste facility, or a post closure care permit, it is regulated under 40 CFR Part 264 and 6 CCR 1007-3, Part 264. Facilities can also be permitted under the corrective action provisions of RCRA for the purpose of site cleanup actions similar to those under CERCLA."

Page 3-5, para. 3, line 4: The term "interim status permit" should read "interim status or permit".

Page 3-5, para. 4: Where ever the reference to 40 CFR occurs the State regulations should also be referenced. This should be 6 CCR 1007-3 since in most cases the state regulations are more stringent than the CFR.

Page 3-5, para. 4; line 1: As discussed earlier, there are only three regulated units under interim status instead of the four stated here.

Page 3-6, para. 2: Where the 40 CFR is referenced, 6 CCR 1007-3 should be added.

Page 3-6, para. 2, line 12: "All four of the above" needs to be changed to "All three of the above".

Page 3-7, para. 3: Add 6 CCR 1007-3 to references

Page 3-8: The interpretations of the ground water monitoring requirements under RCRA are not correct. Under Applicability 40 CFR 265.90(b) a ground water monitoring program must be developed which comply with Sections 265.91 through 265.94. This first program is referred to as the detection monitoring program. An outline of an Assessment plant is to be submitted under Section 265.93(a). This outline is used to generate a characterization plan if a detection of a hazardous substance under 265.93(d)(1) occurs. This interpretation is consistent with the RCRA Ground Water Monitoring Compliance Order Guidance, Final, 1985.

Pages 3-8 to 3-10: Add 6 CCR 1007-3 reference along with 40 CFR references on these three pages.

Page 3-10, para. 1, line 3: Change "EPA Regional Administrator" to "CDH Director".

Pages 3-11 and on: There are many places in the report from this point on where the reference to 6 CCR 1007-3 needs to be inserted. The specific points will not be discussed or noted from this point on, however, the additions need to be made for the final report.

Page 3-17, Table 3-1: The columns in this table should be widened so they are easier to read. In addition a footnote should be added showing the source of these maximum concentrations.

Page 3-22, para. 2, line 1: The acronym PA/SI stands for Preliminary Assessment/Site Investigation.

Page 3-25, para. 1, line 5: Explain how "some of these investigations would impact groundwater resources".

Page 3-28, Sec. 3.3: This is a good listing of requirements, perhaps it could also be put in chart form to assist the reader in understanding how they all fit together.

Page 4-1, para. 3: The Original Process Waste Lines is not an interim status unit as was commented on earlier.

Page 4-1, last para., line 1: The document discusses the differences between CERCLA and RCRA monitoring networks by area and, as in this sentence, states that RFP has an Alternate Groundwater Monitoring System which is in compliance with 40 CFR 265.90. The distinction between the two primary groundwater monitoring programs at RFP must be clarified. For example, why are the two programs identical in their implementation.

Page 4-2, Table 4-1: There are inconsistent titles between this table and Table 4-2. One shows the geology group as "Geohydrology/Geophysics" and the other as "Geology/Hydrogeology", one must be wrong.

Page 4-3, Table 4-2: This table is not clear. It doesn't really show who is in each position and what do they do.

Page 4-6, Table 4-4: This table has some information that needs to be explained. For example what is the unlabeled column with the numbers 180, 181, 182,etc. in sequence? Can the RCRA required wells be separated from the other wells?

Page 4-17, last para.: There needs to be discussion on the adequacy of the well sampling program. Has statistical analysis been performed to verify that RFP is sampling the proper number of wells. Are quarterly samples necessary for all wells? Are the proper parameters being tested? It must be demonstrated that the well sampling program is adequate but not more than necessary.

Page 4-32, Sec. 4.3: This section should be expanded to clearly define what the groundwater protection program is.

Page 5-1, para. 3, line 2: The RCRA groundwater component is not in compliance, as discussed earlier.

Page 5-4, Reporting: Reporting of information and its ultimate use form the foundation of how that particular program is managed. This document only addresses the reporting required under the RCRA regulations and the infrequent characterization reports. As addressed in earlier comments, a tremendous amount of data is collected in the groundwater program and very little of it is evaluated or reported. This document needs to describe in detail the reporting process for each of the programs for which groundwater data is gathered. This would include the RCRA, CERCLA, water level measurements, background and geologic characterization efforts. It should be spelled out what the objectives of collection are, how the data is analyzed, how it is to be used, what reports it is required in, and how the data or resulting analysis is distributed.

Page 5-4, para. 2, line 1: As mentioned in previous comment, the RCRA groundwater component is not in compliance.

Page 6-2, para. 1: This paragraph should discuss who the responsible personnel are, how they go about making the changes, and when does this change occur in relation to the program operation.

Page 8-1, Section 8.1: This section should also include the ADS sheets that pertain to the groundwater program.